Abgrund v8_4

Abgrund, ein Traktat über die Logik der Menschenschaft

Abgrund, a tractatus about the logic of human-ness

This is the system called Abgrund $S\backslash Abgrund$.
My goal is to formalize firstly a system's architecture with which any scientific fact can be described. This is done based on a theory of Flow where everything can be derived and described via changes e. #about Any description about reality remains informative. Normative descriptions only apply to theoretical subjects derived from human thoughts such as human laws and ethics, nature sciences and other passed on communications. #!!
Everything expressed is assumed to be true $Ⓐ\ E = true$ unless expressed otherwise nE. The negation nE expresses not the failure of the expression $\not E$ but all else that is not expressed. #truth

When some thing B is expressed then there is always some other thing H not expressed. #hidden

$$Ⓐ\ B \implies Ⓐ\ B\ H$$

Basically one thing is written in one consecutive sequence of characters and only a space $' '$ distinguishes it from the other. So any concatenation expresses one entity. Parenthesis $()$ and similar do the exception.
For certain relations a focused entity A is needed - then the relations are expressed from its point of view. As an example every thing could have an outer $O\backslash A$ and an inner part $A\backslash I$ more generally called the Setting $Setting\backslash E$ and Configuration $E\backslash Configuration$ of the thing. #expression

This said every 'thing' M has some identification i which expresses only the thing in itself. That M behaves on the basis of its Sub and its Super $Ⓑ\ M = Super\ Sub$ is learned. #membership This requires the C to own a memory which creates the observed's picture as reexpression for recall. #memory

The monad is a picture of a thing. Changes on the thing change its picture not the thing in itself, obviously. #picture

$$'thing' \mapsto M$$

Summarizing: for every 'some' Entity there exists a picture M which we change using expressions, there exists some other Entity which is not the Entity nM, there exists that of what the Entity is made of I, and there exists its environment O. #sum1

$$!'thing' \mapsto M =' thing', nM, A/M, A\backslash M$$

An expression of a thing is its identification i which shall be used like a name. It is written in front its monad's content. #identification

$$i('content')$$

$$\text{Ⓔ}\ Gerald('nice','cute','unfair')$$

Things are identified by some property Π. Properties are assumed by some observer C to distinguish one thing from another. Greek capital letters may be used as placeholders. #property

$$\text{Ⓓ}\ \text{Property} : \Pi = C(A \subset B)$$

$$\text{Ⓔ}\ Gerald(\Gamma, \Delta, \Omega)$$

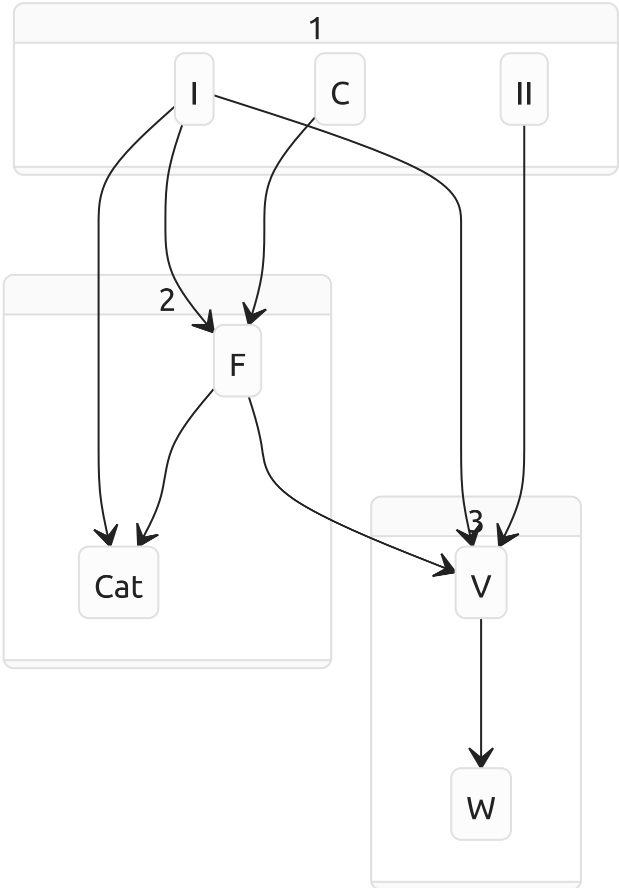
Properties are attributed through grouping $M(\Pi)$ or attribution $M.\Pi$ and can be handled as monads.
C as a process $C()$ also establishes categories based on properties as a convention. The whole system created $\forall CM$ by an observer is a view V.

$$\text{Ⓓ}\ View : V = \forall CM$$

Views of a system combined $\forall V$ are called a world W. #view #world

$$\text{Ⓓ}\ World : W = \forall V$$

While designing systems in worlds either every thing is ultimately possible or impossible by default. Expressions are then made to contrast that by either setting constraints in possible worlds or permissions in impossible worlds (this is never about 'conditioning' reality). For example in Abgrund all is possible and expressions constrain the system. #constraint #permission #possibility



Up until now there have mostly only been constants Z used for expressing. Describing states of a system is a good start but our world is not constant. Rather, nothing in this world is constant but in constant change. To describe a changing world it is of little use to describe 'its looks'. So as its been done with the picture M of 'thing' we create a 'picture' of change called the process e. #process

$$ⓛ\ !'change' \mapsto process : e$$

By definition it is the relevant difference between two states expecting there is one.

$$ⓓ\ (1M - 2M = e) \wedge (1M \neq 2M)$$

Notice that in order to tell a difference in the first place an observer is needed ⓛ $!C$. Processes same as monads have an environment - as they are a piece of larger process, they can be broken down into pieces - smaller processes and negated. Negation always means all but the expressed including supers and subs.

$$!'change' \mapsto e =' change', ne, A/e, A\backslash e$$

And just like that we have operated on a process! It may not seem intuitive at

first but it is easy to think of changing something that is about to happen like when cleaning becomes a list of phone calls to cancel the wedding.

$$\textcircled{E}\ phone\_rings(cleaning(washing\ scrubbing)\ wedding\_canceled)$$

Chained they look like this, also notice the notation as range:

$$\textcircled{E}\ chain : 1e\ 2e\ 3e\ 4e =: R(1\ 4) * e$$

By convention R creates a monad where the members indicate a range. Digits are ordinals $1\ 2\ 3\ 4$ only by default. #range
When they appear in sequence one process follows another $2\ 3\ 4$ - a process chain. They can then be grouped into super processes. Less strict is the activity chain for which a strict sequence is not necessary. #activity

$$\textcircled{T}\ activity : 1e\ 2e\ 4e$$

Activities can be made into an occurrence if the processes could have been expressed as the same chain. 'Plato being alive and being a potato head' or 'Plato being dead while the author is a potato head' are example occurrences. #occurrence

$$\textcircled{D}\ occurrence : 1e = 2e \cap 3e$$

With activities any monads can be reduced into lists of processes as follows: take golfing - golfing is an activity. Driving to the first pit, choosing a club, warming up, hitting. Some activity reduced to smaller activities. Take a sloth $1M$ - it feeds from its mom's breast $1e$, it grows up $2e$, it chills on a branch $3e$, it becomes soil $4e$. These are all activities in themselves, all reducible to even smaller ones. #sum2

$$\textcircled{A}\ sloth(head\ body\ tail\ h) \implies Sloth(Head\ Body\ Tail\ H)$$

Change must be more elementary: otherwise we would not notice anything, no light reaching your eyes, no brain signals etc. $\textcircled{L}\ !e$. Monads are being constructed through perception and thought (e.g. unicorns) $e \mapsto M$ or $unicorn \mapsto Unicorn$. So change and its picture process are 'closer' to real existence than 'things' and monads by ontological means. #closeness

$$\textcircled{L}\ !'real' \leq e \leq M$$

Taken all pictures (states) of a unicorn into account it would come close to the idea of the unicorn as an activity if the interpreting part of C would be removed.

$$Ⓦ \sum Unicorn \approx unicorn -' bias'$$

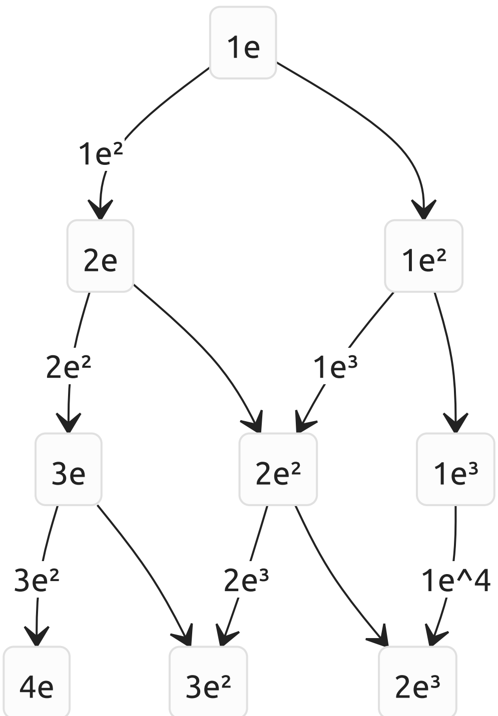
Now what makes one process do this and not that can not be explained up until today. As a fallback we can require the existence of units Ⓒ $!U$. A unit U acts like an identity i but instead is not unique - it only interacts with other processes and monads that have the same units property.

$$Ⓔ\, U(1)e\, U(1)e\, U(2)e = U(1)e2\, U(2)e$$

Coupled with an identity we may write iUe and iUM. A property can then be used as a placeholder for differences using an ordinal creating a so called cardinal. #unit

$$+(1\ 2) = 3$$

Cardinals of different order can recursively be described as follows:



Generally the grade G can be applied to any monad or process M^G. If in different grades processed with each other they behave differently than those of the same grade even if they have the same unit. #grade

$$Ⓔ\, 2^1 + 3^1 \neq 2^2 + 3^2$$

Conventionally explained the same process of different grades $(+, \times, \uparrow)$:

$$Ⓔ\, 2 + 3 = 5 \neq 2 +^2 3 = 6 \neq 2 +^3 3 = 8$$

A grade G brings lots of possibilities at the cost of readability. But it also saves

many symbols that then can be used for different purposes ($*$ used now as a relation for example).

Given some monad using change any following (in any direction, memory independent) constructable monad is said to have the same path $.\,Path$. All path-related monads are called a filter $\forall A.\,Path$. All entities of selected properties are called a phase. #phase #path #filter

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All expressions can be taken to be goal-driven or at least oriented. A goal G is to be chosen that information is insufficient for some proposition about it. Or the goal is to prove an expression's validity (resolve doubt). By setting a goal some changes become more important for the achievement. Generally that a monad $1M$ is influential at all can be defined by the change 'influence' a and its directness towards the goal $2M$.

$$!!\ 1M\ e = 2M$$

The **effect** is then either influencing towards $+e$ or away $-e$ from the goal. **Affect** $\pm a$ is influence on not-goal entities. Despite the causation there is no magnitude value or a scalar's directive needed as influence either triggers ($\pm$) or does not (reason to hide it H). #influencetheorem #influence

$$D\ M\ \ \pm e \rightarrow A$$

Even more determinism must be revised though. Firstly grading of monads and changes of all grades create a new category, the entity E is introduced. #grades

$$D\ Entity :\leftrightarrow (\forall e^0(M)\ \forall e^1\ \forall e^2 \ldots)$$

Secondly expressed entities stay true but they are not determined solely by their inner I and outer O parts anymore. For a specific picture to be true certain conditions must be met. If exactly one possible outcome of an entity is possible then the entity's existence is fulfilling $= 1$. Sometimes they are not ≤ 1, the conditions are only satisfactory for a number of parts. #fulfillment #satisfaction

The satisfying parts so called choices altogether represent the entity's field F as probability distribution. #field

$$Ⓓ\ FE := \forall Choices$$

In a field the definite existence of an entity is given but its exact picture is not. Though the fulfilled picture can be evoked if more conditions (constraints, permissions) are introduced.
Lastly these rules imply that not just whole formulae but also propositions $\forall E$ themselves are modality bound. Here some summary: there exists the fulfilled, global existence - law Ⓛ which **must** exist when expressed.
The rest are only satisfactory but global: the definition Ⓓ **should** apply, the convention Ⓒ **may** apply. And for the purpose of the work these local rules are set: the hypothesis Ⓗ whos fulfilled existence must be proven, the supposition Ⓢ **shall** apply, the assumption Ⓐ **could** apply so far for constraining systems. Permissioning includes **can** as supposition. (!!not at all satisfied with these terms)
Given those we can speak of influences instead of triggers and think of more varying entities function-wise (purposes). #modality
Goals are set by Viewers as means of desire and deflection of pain, hence achieving them is a goal in itself. An existing idea Ⓘ M of a goal Ⓞ M is constructed. While the idea may consist of propositions which themselves are insufficient. So in order to gain information using sufficient propositions (facts) $=1$ the ideas <1 are studied until they comply with the goal approximately $|1$. Also during the process previously sufficient entities might have to be revised or declared unrelated. When progressing the sufficient and related propositions (I and O) build up a web of sufficient propositions which make approaching the goal easier. #goaltheory #goal

$$\forall P := E|$$

Meaningful $\pm\Pi$ expressions are those if through their expression any influence towards any goal is achieved. #meaning
Induction $l(E\ I)$ and deduction $l(E\ O)$ approach goals from different directions. #limit These limits create boundaries of meaning which are not part of the goal but of its neighbor from the direction the proposition lies.

$$l('Goal'\ 'Direction')$$

Limits in themselves can not be expressed but as contrast of two entities. The contrast is the difference between entities shown as properties, behaviour, etc. .

If obtaining a goal is not possible. These system's boundaries do not include the goal. This may be due to insufficient permissions or too strong constraints of either propositions or goals.
formation!

All that is needed to express reality of human minds has been set.

- Creation of pictures &
- Differentiation of parts as groups via properties &
- Categorization into drawers
- Formation of one to another
- Evaluation as needs &
- Refinement of view/knowledge map
  These helpers are principles constructed to ensure efficiency of survival an amateur might argue. But in a world where existence is not the purpose of a human and things only do what they ought to do (unhumanized) it would be better to think of a flow. One possibility is to keep using efficiency models to reduce complex systems to patterns and refine them over time by increasing knowledge. The second approach would be to accept faith and keep on living as it is supposed to be. And the last possibility seems to be still unknown. Although there are ways to express nature through lossless compression instead of reducing but how can this be applied? #principlestheory

  I 'nature/information', purpose for that, system to integrate the information with

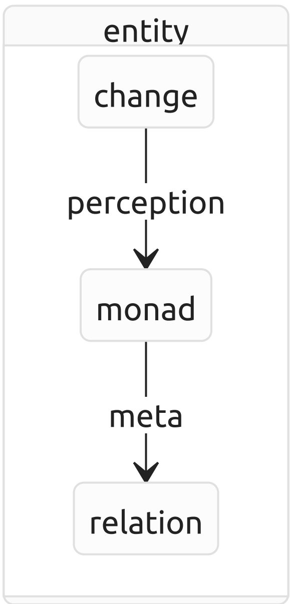
  ? Where does the information for integration begin and end? What should be used f

  This again leads back to the previous problem that this time information is not reduced but selected for a purpose. The target system would end up as incomplete as before. So why even bother if nature were to complex to be completely expressed? #doubts #selection

The system's conditions could be called faith - unbound of any specific entity. The system itself the frame. The observer can be called author. She writes the book, the story lays down its frame. And some time passes as she observes propositions emerge able to communicate conditions themselves. But they lack capacity and expression. More time passing they find themselves directing

proposition development in practice. But they lack capacity. More time passing they map propositions from one level of observation to a smaller one to gain almost an infinite playground. They start to backmap to higher levels. But they are bound by faith. Randomizing their tests they find a system conditioned like their faith and keep it running, observing. They do not lack anymore but find themselves being unable to contact the author. But they can write their own book now. So they create themselves in a lower frame.

On entities



More on digits

1, 2, 3, 4 are ordinals: they describe order as identity. 5, 6, 7, 8 are not order bound as identity. 0 is used in any of the two for absents and the overclock as in the decimal 10. 9 is the last monad.

$$E\ Ordinal : 1(\ )$$

$$E\ Cardinal : 1$$

On relations

Given a duple of monad M and a process o to get its offsprings oM the relation r is the operated differences between members $5M - 6M$.

$$D\ r(5M\ 6M) := 5M \in B - 6M \in B$$

Relation variables for monads are processes $E\ r(M\ M) = e$ for processes a process of second order $E\ r(e\ e) = e^2$ and so on.

More on negation

is a process $n()$. If M is negated then all else is true, also its Supers or Subs. Nothing true is generally empty $\varnothing$ which is no expression. With all negated $n(Flow)$ the result is like the empty expression $E()$.

$$\varnothing \neq n(E) \equiv E() >< E(\ )$$

More on membership

?rel with greek letters

More on Pictures

pictures need a space in order to describe it physically. concretisize rel using expressions as images
Looking at a thing in nature always makes me wonder what it would be like if my perception of it had been unbiased by senses etc.. This actually real thing (although making it a thing is also biasing) is called a preimage because its existence may be independent of us creating the image but unformed (see more on superstates). #real
States of a monad (or a whole system) can be expressed as pictures. Similarly the difference between two pictures remains change.

Last thing to do is Kopimi!